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1. povećana adhezija na izvanstanični matriks putem integrina
2. smanjeno nakupljanje citostatika (zbog smanjenog ulaska citostatika u stanicu i/ili zbog pojačanog izbacivanja citostatika pomoću membranskih pumpi za izbacivanje)
3. smanjeno vezanje citostatika na ciljne molekule koje se može postići:
 - smanjenom metaboličkom aktivacijom citostatika
 - enzimatskom inaktivacijom citostatika metilacijom ili vezanjem na zaštitne molekule u citoplazmi (glutation)
 - povećanom ekspresijom ili mutacijom ciljnih molekula
4. povećana sposobnost popravka i/ili tolerancije oštećenja u DNA
5. smanjena indukcija apoptoze (programirane stanične smrti).

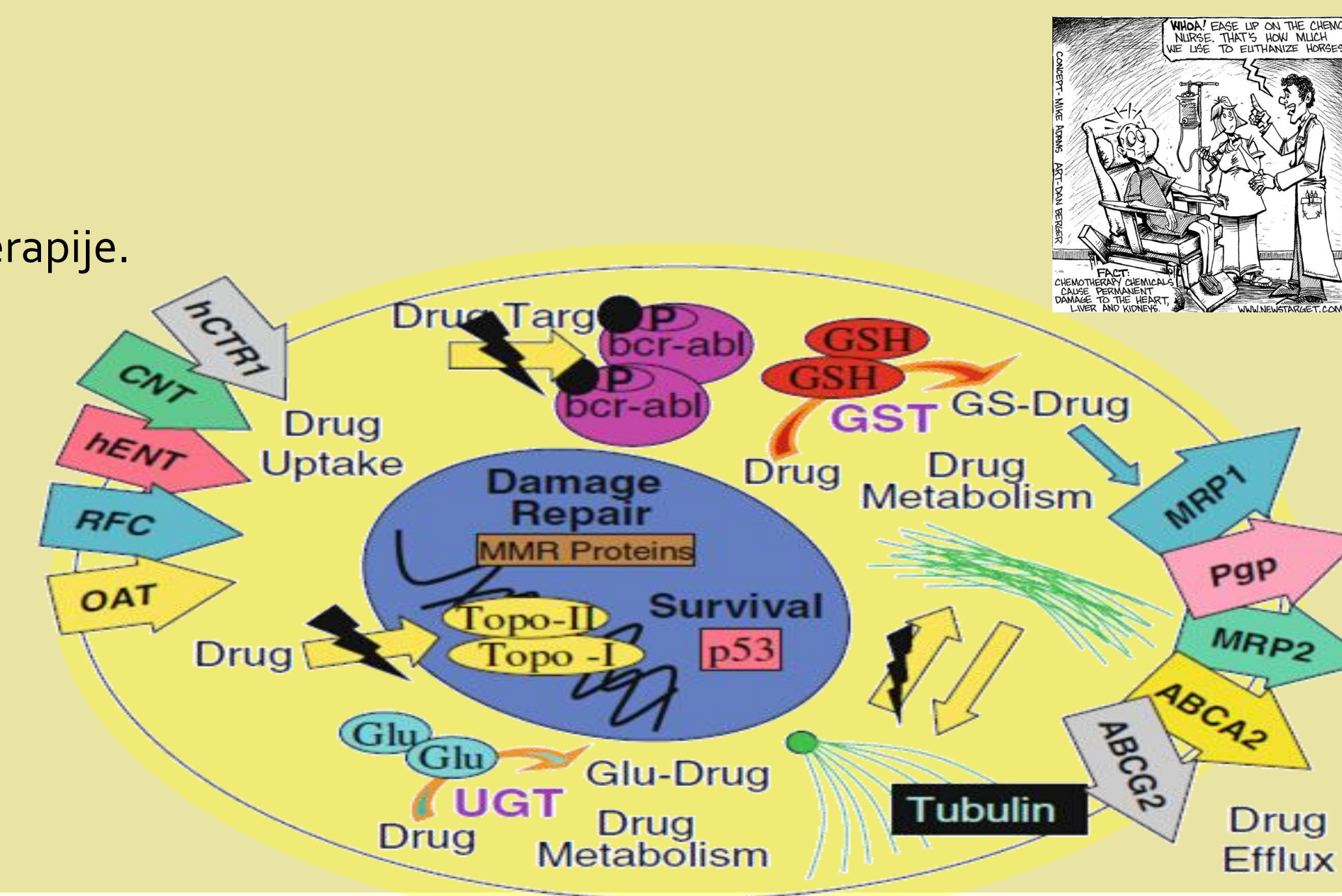
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Figure 1 Data Summary:

Left Graph: Doxorubicin Concentration (µg/ml)

Concentration (µg/ml)	H2O2 (%)	T7 (%)
0	~95	~95
0.0017	~90	~95
0.005	~80	~95
0.015	~30	~65
0.045	~10	~15
0.134	~5	~10

Right Graph: Vincristine Concentration (µg/ml)

Concentration (µg/ml)	H2O2 (%)	T7 (%)
0	~95	~95
0.0025	~60	~85
0.0074	~15	~45
0.023	~15	~25
0.067	~15	~15
0.2	~15	~15

Western blot analysis showing the expression of PARP, Prokaspaza 3, and ERK1/2 in Hep2 and 7T cells. The blots are organized into three rows corresponding to the proteins. The columns represent the cell lines (Hep2 and 7T) and the time points (K, 16, 24, 48 hours) after treatment with Vrijeme (h). PARP shows a strong band at K and 16h for Hep2, and a strong band at K and 16h for 7T. Prokaspaza 3 shows a strong band at K and 16h for Hep2, and a strong band at K and 16h for 7T. ERK1/2 shows a strong band at K and 16h for Hep2, and a strong band at K and 16h for 7T.

Western blot analysis showing protein expression levels for Hsp27 and Hsp70 across four lanes: Ctr1, Nhe1, Atp7a, and Rps18. The blot is divided into two sections: Hsp27 (top) and Hsp70 (bottom). Each section has two rows of bands. The lanes are labeled on the left: Ctr1, Nhe1, Atp7a, and Rps18. The lanes are grouped under two headers: Hsp27 (left) and Hsp70 (right). The bands are represented by horizontal bars of varying lengths, indicating relative protein levels.

A

Time (h)	Growth with Inhibitor (OD ₆₀₀)	Growth without Inhibitor (OD ₆₀₀)
0	0.00	0.00
12	0.08	0.06
24	0.08	0.06
36	0.08	0.06
48	0.18	0.12
60	0.22	0.20

B

Time (h)	Growth with Inhibitor (OD ₆₀₀)	Growth without Inhibitor (OD ₆₀₀)
0	0.00	0.00
16	0.02	0.00
24	0.04	0.03
40	0.18	0.08

Condition	ctrl1
HEp2	1.0
7T	0.5
HEp2	1.0
7T	0.5

The diagram illustrates the structure of an integrin heterodimer. It consists of two subunits, α (red) and β (blue), which form a heterodimer. The α subunit has a red oval at its extracellular end, and the β subunit has a blue oval. Both subunits have a green oval at their transmembrane region. The α subunit is labeled with M^{2+} near its extracellular end. The heterodimer is embedded in a lipid bilayer, which is labeled "izvanstanišni matriks" (extracellular matrix) above and "Signalne molekule" (signaling molecules) below. The α subunit is connected to a purple box labeled "Integrin heterodimer". The β subunit is connected to a green box labeled "Signalne molekule".

[illegible]

Figure 3 Integrin $\beta 3$ expression. **A:** Integrin $\beta 3$ was highly expressed (++++) in gastric carcinoma ($\times 250$). **B:** Integrin $\beta 3$ was negatively (+) expressed in non-tumor gastric mucosa ($\times 250$).

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Slika 1. Ekspresija $\alpha v\beta_3$ integrina na površini Cal 27 stanica i $\alpha v\beta_3$ -stabilnih transfektanata 2B3 i 2B1

Slika 1. Ekspresija αv integrina na površini stanica i $\alpha v\beta_3$ -stabiliziranih transfektanata 2B3 i

Tablica 1. Vrijednost fluorescencije dobivena vezanjem protutijela koja prepoznaju $\alpha v\beta 3$ integrin za Cal 27 stanice i stabilne transfektante 2B3 i 2B1.

Figure 1 consists of six bar charts (A-F) showing the effects of various phytochemicals on cell growth. The y-axis for all charts is 'Cell growth (OD)' ranging from 0 to 100. The x-axis represents the concentration of the compound in $\mu\text{g/ml}$. Each chart compares three cell lines: Ca27 (blue bars), 293T (red bars), and 293 cells (purple bars). Error bars represent standard deviation.

- (A) Ascorbic acid:** Concentrations are 0, 0.025, 0.05, and 0.5 $\mu\text{g/ml}$. Cell growth decreases as concentration increases for all cell lines.
- (B) EGCG:** Concentrations are 0, 0.003, 0.03, and 0.3 $\mu\text{g/ml}$. Cell growth decreases as concentration increases for all cell lines.
- (C) Resveratrol:** Concentrations are 0, 0.01, 0.03, 0.09, and 0.3 $\mu\text{g/ml}$. Cell growth decreases as concentration increases for all cell lines.
- (D) ETO:** Concentrations are 0, 10, and 1 $\mu\text{g/ml}$. Cell growth decreases as concentration increases for all cell lines.
- (E) CPT:** Concentrations are 0, 0.05, 0.15, 0.3, and 0.5 $\mu\text{g/ml}$. Cell growth decreases as concentration increases for all cell lines.
- (F) Quercetin:** Concentrations are 0, 0.05, 0.15, 0.3, and 0.5 $\mu\text{g/ml}$. Cell growth decreases as concentration increases for all cell lines.

Slika 2. Osjetljivost Cal27 i Cal27 $\alpha\beta 3$ -stabilnih transfektanata na: (A) cisplatinu (cDDP), (B) doksorubicin (DOX), (C) mitomicin (MMC), (D) fluorouracil (5-FU), (E) etopozid (ETO). Citotoksičnost je mjerena MTT testom nakon tretmana citostatikom tijekom 72 sata

Slika 5. (A) Mjerenje apsorpcije
(vidljiv dose response na stabilnih transfektantima).
Citotoksičnost je mjerena MT

na Cal27 i Cal27- $\alpha\text{v}\beta 3$ trans
) ;(B) Osjetljivost Cal27 i Co
P) nakon tretmana s 0,01 m
ana citistatikom tijekom 72 sat

(A)

0,04mg/ml vitronectin

Condition	fold of control
4*10 ⁴	~0.6
4*10 ⁴ + vitronectin	~0.2
4*10 ⁴ + vitronectin + 10 ⁻⁶ M TGF- β	~1.2
4*10 ⁴ + vitronectin + 10 ⁻⁶ M TGF- β + 10 ⁻⁶ M TGF- β	~1.8

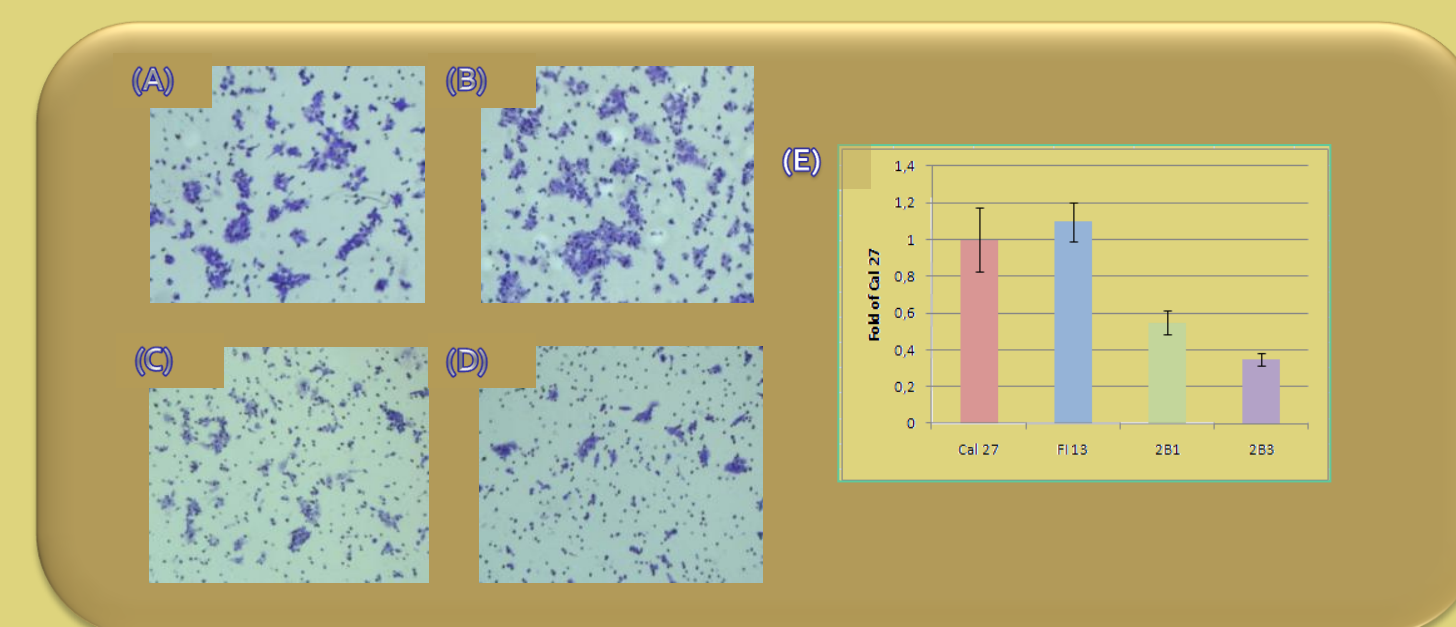
(B)

0,04mg/ml fibronectin

Condition	Fold induction
4*10 ⁶	~1.0
4*10 ⁶	~1.0
4*10 ⁶	~2.2
4*10 ⁶	~1.8

Slika 6.
Kvantifikacija
relativne adhezije
na: (A) vitronektin i
(B) fibronektin
Cal27- $\alpha\beta_3$
stabilnih
stransfektanata u
usporedbi s
roditeljskim Cal27
stanicama.

Migracija Cal27 stanica i Cal27- α v β 3 stabilnih transfektanata pokazuje da povećanje ekspresije integrina α v β 3 inhibira migraciju, što ukazuje na integrinom α v β 3 posredovani invazijski potencijal.



Slika 7. Test migracije (A) roditeljskih Cal27 stanica, (B) kontrolnih stanica, (C) 2B3 i (D) 2B3 Cal27- $\alpha\text{v}\beta 3$ stabilnih transfektanata u Boyden komoricama. (E) Kvantifikacija relativne migracije Cal27- $\alpha\text{v}\beta 3$ stabilnih transfektanata u usporedbi s roditeljskim Cal27 stanicama.

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